

**ABSTRACT OF THE DISCLOSURE**

A filter circuit includes a transconductance device for outputting a current signal according to an input voltage and a feedback voltage, a transresistance device coupled to the transconductance device for outputting a output voltage according to the current signal, and a feedback device coupled between the transconductance device and the transresistance device for outputting the feedback voltage according to the output voltage. The transresistance device is coupled to the transconductance device via a resistor network that includes a multiple stages connected serially. Each stage of the resistor network has an input node, an output node, a first resistor coupled between the input node and the ground, and a second resistor coupled between the input node and the output node.